

1-104. (CANCELED)

105. (NEW) A multistep automatic transmission comprising;

a drive shaft (AN) and an output shaft (AB);

at least first, second and third planetary gearsets (RS1, RS2, RS3) and each of the first planetary gearset (RS1), the second planetary gearset (RS2), and the third planetary gearset (RS3) comprising a sun gear, a carrier and a ring gear;

at least first, second, third, fourth and fifth shifting components (A, B, C, D, E);

the first planetary gearset (RS1), the second planetary gearset (RS2) and the third planetary gearset (RS3) being aligned co-axially with one another;

the second planetary gearset (RS2) and the third planetary gearset (RS3) are axially adjacent one another;

the sun gear (SO3) of the third planetary gearset (RS3) being engagable, via the first shifting component (A), with a transmission housing (GG) of the multistep automatic transmission;

the drive shaft (AN) being connected to the sun gear (SO2) of the second planetary gearset (RS2);

the drive shaft (AN) being at least one of: a) engagable, via the second shifting component (B), with the sun gear (SO1) of the first planetary gearset (RS1) and b) engagable, via the fifth shifting component (E), with the carrier (ST1) of the first planetary gearset (RS1);

at least one of the sun gear (SO1) of the first planetary gearset (RS1) being engagable, via the third shifting component (C), with the transmission housing (GG) and the carrier (ST1) of the first planetary gearset (RS1) being engagable, via the fourth shifting component (D), with the transmission housing (GG);

wherein one of:

i) the output shaft (AB), the ring gear (HO1) of the first planetary gearset (RS1) and the carrier (ST3) of the third planetary gearset (RS3) are connected with one another; the carrier (ST2) of the second planetary gearset (RS2) is connected with the ring gear (HO3) of the third planetary gearset (RS3), and the carrier (ST1) of the first planetary gearset (RS1) is connected with the ring gear (HO2) of the second planetary gearset (RS2), and

ii) the output shaft (AB), the ring gear (HO1) of the first planetary gearset (RS1) and the carrier (ST2) of the second planetary gearset (RS2) are

connected with one another, and the carrier (ST3) of the third planetary gearset (RS3) is connected with the ring gear (HO2) of the second planetary gearset (RS2), and the carrier (ST1) of the first planetary gearset (RS1) is connected with the ring gear (HO3) of the third planetary gearset (RS3);

one shaft axially passes centrally through the second planetary gearset (RS2); and

the first shifting component (A) is a multidisk brake;

the second shifting component (B) and the fifth shifting component (E) are axially located between the first planetary gear set (RS1) and the second planetary gear set (RS2); and

the fourth shifting component (D) is radially arranged above the first planetary gearset (RS1), the second planetary gearset (RS2) and the third planetary gearset (RS3).

106. (NEW) The multistep automatic transmission according to claim 105, wherein the one shaft axially passes centrally through the first planetary gearset (RS1).

107. (NEW) The multistep automatic transmission according to claim 106, wherein the one shaft which axially passes centrally through both the first planetary gearset (RS1) and the second planetary gearset (RS2) is the drive shaft (AN) of the automatic transmission.

108. (NEW) The multistep automatic transmission according to claim 105, wherein a disk set (500) of the fifth shifting component (E) has a larger diameter than a disk set (200) of the second shifting component (B).

109. (NEW) The multistep automatic transmission according to claim 105, wherein the second shifting component (B) has a servo unit (210) for actuating a disk set (200) of the second shifting component (B) and the fifth shifting component (E) has a servo unit (510) for actuating a disk set (500) of the fifth shifting component (E); and  
the second shifting component (B) and the fifth shifting component (E) form an assembly and share a common disk carrier (ZYLBE) which supports outer disks of the disk set (200) of the second shifting component (B) and inner disks of the disk set (500) of the fifth shifting component (E).

110. (NEW) The multistep automatic transmission according to claim 105, wherein a connection between the carrier (ST1) of the first planetary gearset (RS1) and the ring gear (HO2) of the second planetary gearset (RS2) includes an outer disk carrier of the fifth shifting component (E).

111. (NEW) The multistep automatic transmission according to claim 109, wherein the common disk carrier (ZYLBE), shared by the second shifting component (B) and the fifth shifting component (E), forms a clutch space within which the disk set (200) and the servo unit (210) of the second shifting component (B) are arranged.

112. (NEW) The multistep automatic transmission according to claim 109, wherein at least one of:

the servo unit (510) of the fifth shifting component (E) axially biases the disk set (500) of the fifth shifting component (E) towards the first planetary gearset (RS1) during engagement of the fifth shifting component (E), and

the servo unit (210) of the second shifting component (B) axially biases the disk set (200) of the second shifting component (B) towards the first planetary gearset (RS1) during engagement of the second shifting component.

113. (NEW) The multistep automatic transmission according to claim 112, wherein at least one of:

the servo unit (510) of the fifth shifting component (E) is axially located between the disk set (500) of the fifth shifting component (E) and the second planetary gearset (RS2); and

the servo unit (210) of the second shifting component (B) is axially located between the disk set (200) of the second shifting component (B) and the second planetary gearset (RS2).

114. (NEW) The multistep automatic transmission according to claim 109, wherein at least one of:

the servo unit (510) of the fifth shifting component (E) axially biases the disk set (500) of the fifth shifting component (E) toward the second planetary gearset (RS2) during engagement of the fifth shifting component (E); and

the servo unit (210) of the second shifting component (B) axially biases the disk set (200) of the second shifting component (B) toward the second planetary gearset (RS2) during engagement of the second shifting component (B).

115. (NEW) The multistep automatic transmission according to claim 114, wherein at least one of:

the servo unit (510) of the fifth shifting component (E) is axially located between the disk set (500) of the fifth shifting component (E) and the second planetary gearset (RS2), and the servo unit (210) of the second shifting component (B) is axially

located between the disk set (200) of the second shifting component (B) and the second planetary gearset (RS2).

116. (NEW) The multistep automatic transmission according to claim 109, wherein the drive shaft (AN) axially passes centrally through the first planetary gearset (RS1) and supports at least one of the servo unit (210) of the second shifting component (B) and the servo unit (510) of the fifth shifting component (E).

117. (NEW) The multistep automatic transmission according to claim 109, wherein the sun gear (SO1) of the first planetary gearset (RS1) supports at least one of the servo unit (210) of the second shifting component (B) and the servo unit (510) of the fifth shifting component (E).

118. (NEW) The multistep automatic transmission according to claim 105, wherein the third shifting component (D), when viewed axially, is arranged radially above the first planetary gearset (RS1), the second planetary gearset (RS2) and the third planetary gearset (RS3).

119. (NEW) The multistep automatic transmission according to claim 118, wherein the third shifting component (C) is axially adjacent the fourth shifting component (D), each of the third shifting component (C) and the fourth shifting component (D) has a disk set (300, 400) and the disk set (300) of the third shifting component (C) and the disk set (400) of the fourth shifting component (D) each have similar dimensions.

120. (NEW) The multistep automatic transmission according to claim 118, wherein the third shifting component (C) and the fourth shifting component (D) comprise a preassembled system which comprises:

a disk set (300) of the third shifting component (C);

a disk set (400) of the fourth shifting component (D);

an outer disk carrier common to the third shifting component (C) and the fourth shifting component (D);

a servo unit (310) for actuating the disk set (300) of the third shifting component (C) is at least partially integrated into the common outer disk carrier; and

a servo unit (410) for actuating of the disk set (400) of the fourth shifting component (D) is at least partially integrated into the common outer disk carrier.

121. (NEW) The multistep automatic transmission according to claim 105, wherein the third shifting component (C) is axially located adjacent the first planetary

gearset (RS1) on a side of the first planetary gearset (RS1) opposite the second planetary gearset (RS2).

122. (NEW) The multistep automatic transmission according to claim 105, wherein the first shifting component (A) is axially located on a side of the third planetary gearset (RS3) opposite the second planetary gearset (RS2).

123. (NEW) The multistep automatic transmission according to claim 122, wherein the first shifting component (A) is axially arranged adjacent to the third planetary gearset (RS3).

124. (NEW) The multistep automatic transmission according to claim 105, wherein the first shifting component (A) is axially arranged adjacent to one of an outer wall of the transmission housing (GG) and a transmission housing cover, which is connected to the transmission housing (GG) in a rotationally fixed manner and constitutes an outer wall of the automatic transmission.

125. (NEW) The multistep automatic transmission according to claim 105, wherein the first shifting component (A), when viewed axially, is arranged radially about the third planetary gearset (RS3).

126. (NEW) The multistep automatic transmission according to claim 125, wherein the first shifting component (A) is axially adjacent the fourth shifting component (D), each of the first shifting component (A) and the fourth shifting component (D) has a disk set (100, 400) and the disk set (100) of the first shifting component (C) and the disk set (400) of the fourth shifting component (D) have similar dimensions.

127. (NEW) The multistep automatic transmission according to claim 125, wherein the first shifting component (A) and the fourth shifting component (D) comprise a preassembled system which comprises:

- a disk set (100) of the first shifting component (A);
- a disk set (400) of the fourth shifting component (D);
- an outer disk carrier common to the first shifting component (A) and the fourth shifting component (D);
- a servo unit (110) for actuating the disk set (100) of the first shifting component (A) is at least partially integrated into the common outer disk carrier; and
- a servo unit (410) for actuating the disk set (400) of the fourth shifting component (D) is at least partially integrated into the common outer disk carrier.

128. (NEW) The multistep automatic transmission according to claim 105, wherein an axis of the drive shaft (AN) and an axis of the output shaft (AB) are one of parallel to one another and arranged at angle with respect to one another.

129. (NEW) The multistep automatic transmission according to claim 105, wherein one of a first spur gear (STR1), of a spur gear stage (STST), and a first sprocket wheel, of a chain drive, is axially located between the third planetary gearset (RS3) and the first shifting component (A);

one of:

the output shaft (AB) is actively coupled, via one of the spur gear stage (STST) and the chain drive, to the ring gear (HO1) of the first planetary gearset (RS1) and the ring-gear (HO1)-linked carrier (ST3) of the third planetary gearset (RS3); and

the output shaft (AB) is actively coupled, via one of the spur gear stage (STST) and the chain drive, to the ring gear (HO1) of the first planetary gearset (RS1) and the ring-gear (HO1)-linked carrier (ST2) of the second planetary gearset (RS2).

130. (NEW) The multistep automatic transmission according to claim 105, wherein one of a first spur gear (STR1), of a spur gear stage (STST), and a first sprocket wheel, of a chain drive, is axially located adjacent to one of an outer wall of the transmission housing (GG) and a housing cover fixed to the transmission housing (GG);

one of:

the output shaft (AB) is actively coupled, via one of the spur gear stage (STST) and the chain drive, to the ring gear (HO1) of the first planetary gearset (RS1) and the ring-gear (HO1)-linked carrier (ST3) of the third planetary gearset (RS3); and

the output shaft (AB) is actively coupled, via one of the spur gear stage (STST) and the chain drive, to the ring gear (HO1) of the first planetary gearset (RS1) and the ring-gear (HO1)-linked carrier (ST2) of the second planetary gearset (RS2).

131. (NEW) The multistep automatic transmission according to claim 105, wherein the drive shaft (AN) and the output shaft (AB) are coaxial with one another.

132. (NEW) The multistep automatic transmission according to claim 130, wherein the first sprocket wheel is axially located adjacent to one of an outer wall of the transmission housing (GG) and a housing cover fixed to the transmission housing (GG)

and the first shifting component (A) is located axially adjacent to the third planetary gearset (RS3) within a cylinder space formed by the first sprocket wheel of the chain drive.

133. (NEW) The multistep automatic transmission according to claim 105, wherein the drive shaft (AN) and the output shaft (AB) are coaxial with one another.

134. (NEW) The multistep automatic transmission according to claim 133, wherein the output shaft (AB), which is actively connected to the ring gear (HO1) of the first planetary gearset (RS1), axially passes centrally through the third planetary gearset (RS3).

135. (NEW) The multistep automatic transmission according to claim 133, wherein the output shaft (AB), which is actively linked to the ring gear (HO1) of the first planetary gearset (RS1), axially passes centrally through a clutch space of the first shifting component (A) and the clutch space is formed by at least one of a disk carrier and a servo unit (110) of the first shifting component (A).

136. (NEW) The multistep automatic transmission according to claim 105, wherein selective engagement of the first, the second, the third, the fourth and the fifth shifting components (A, B, C, D, E) achieves a variety of gear ratios such that, when shifting from one gear ratio to one of a next higher gear ratio and a next lower gear ratio, only one of the first, the second, the third, the fourth and the fifth shifting components (A, B, C, D, E), which are actuated, is disengaged and only one of the first, the second, the third, the fourth and the fifth shifting components (A, B, C, D, E) is engaged so that at least six forward gear ratios and one reverse gear ratio are implemented whereby:

a first forward gear ratio is implemented by engaging the first shifting component (A) and the fourth shifting component (D);

a second forward gear ratio is implemented by engaging the first shifting component (A) and the third shifting component (C);

a third forward gear ratio is implemented by engaging the first shifting component (A) and the second shifting component (B);

a fourth forward gear ratio is implemented by engaging the first shifting component (A) and the fifth shifting component (E);

a fifth forward gear ratio is implemented by engaging the second shifting component (B) and the fifth shifting component (E);

a sixth forward gear ratio is implemented by engaging the third shifting component (C) and the fifth shifting component (E); and

the reverse gear ratio is implemented by engaging the second shifting component (B) and the fourth shifting components (D).

137. (NEW) A multistep automatic transmission comprising;

a drive shaft (AN) and an output shaft (AB);

at least first, second and third planetary gearsets (RS1, RS2, RS3) and each of the first planetary gearset (RS1), the second planetary gearset (RS2), and the third planetary gearset (RS3) comprising a sun gear, a carrier and a ring gear;

at least first, second, third, fourth and fifth shifting components (A, B, C, D, E);

the first planetary gearset (RS1), the second planetary gearset (RS2) and the third planetary gearset (RS3) being aligned co-axially with one another;

the second planetary gearset (RS2) and the third planetary gearset (RS3) are axially adjacent one another;

the sun gear (SO3) of the third planetary gearset (RS3) being engagable, via the first shifting component (A), with a transmission housing (GG) of the multistep automatic transmission;

the drive shaft (AN) being connected to the sun gear (SO2) of the second planetary gearset (RS2);

the drive shaft (AN) being at least one of: a) engagable, via the second shifting component (B), with the sun gear (SO1) of the first planetary gearset (RS1) and b) engagable, via the fifth shifting component (E), with the carrier (ST1) of the first planetary gearset (RS1);

at least one of the sun gear (SO1) of the first planetary gearset (RS1) being engagable, via the third shifting component (C), with the transmission housing (GG) and the carrier (ST1) of the first planetary gearset (RS1) being engagable, via the fourth shifting component (D), with the transmission housing (GG);

wherein one of:

i) the output shaft (AB), the ring gear (HO1) of the first planetary gearset (RS1) and the carrier (ST3) of the third planetary gearset (RS3) are connected with one another; the carrier (ST2) of the second planetary gearset (RS2) is connected with the ring gear (HO3) of the third planetary gearset (RS3), and the carrier (ST1) of



the first planetary gearset (RS1) is connected with the ring gear (HO2) of the second planetary gearset (RS2), and

ii) the output shaft (AB), the ring gear (HO1) of the first planetary gearset (RS1) and the carrier (ST2) of the second planetary gearset (RS2) are connected with one another, and the carrier (ST3) of the third planetary gearset (RS3) is connected with the ring gear (HO2) of the second planetary gearset (RS2), and the carrier (ST1) of the first planetary gearset (RS1) is connected with the ring gear (HO3) of the third planetary gearset (RS3);

one shaft axially passes centrally through the second planetary gearset (RS2); and

the first shifting component (A) being a multidisk brake;

the second shifting component (B) and the fifth shifting component (E) are axially located between the first planetary gear set (RS1) and the second planetary gear set (RS2);

the fourth shifting component (D) is radially arranged above the first planetary gearset (RS1), the second planetary gearset (RS2) and the third planetary gearset (RS3); and

the output shaft (AB) communicates, via a link-shaft (STW3), with the third planetary gearset (RS3), the link-shaft (STW3) is coaxial with the drive shaft (AN).

138. (NEW) The multistep automatic transmission according to claim 137, wherein the drive shaft (AN) axially passes centrally through the link-shaft (STW3).

139. (NEW) A multistep automatic transmission comprising;

a drive shaft (AN) and an output shaft (AB);

at least first, second and third planetary gearsets (RS1, RS2, RS3) and each of the first planetary gearset (RS1), the second planetary gearset (RS2), and the third planetary gearset (RS3) comprising a sun gear, a carrier and a ring gear;

at least first, second, third, fourth and fifth shifting components (A, B, C, D, E);

the first planetary gearset (RS1), the second planetary gearset (RS2) and the third planetary gearset (RS3) being aligned co-axially with one another;

the second planetary gearset (RS2) and the third planetary gearset (RS3) are axially adjacent one another;

the sun gear (SO3) of the third planetary gearset (RS3) being engagable, via the first shifting component (A), with a transmission housing (GG) of the multistep automatic transmission;

the drive shaft (AN) being connected to the sun gear (SO2) of the second planetary gearset (RS2);

the drive shaft (AN) being at least one of: a) engagable, via the second shifting component (B), with the sun gear (SO1) of the first planetary gearset (RS1) and b) engagable, via the fifth shifting component (E), with the carrier (ST1) of the first planetary gearset (RS1);

at least one of the sun gear (SO1) of the first planetary gearset (RS1) being engagable, via the third shifting component (C), with the transmission housing (GG) and the carrier (ST1) of the first planetary gearset (RS1) being engagable, via the fourth shifting component (D), with the transmission housing (GG);

wherein one of:

i) the output shaft (AB), the ring gear (HO1) of the first planetary gearset (RS1) and the carrier (ST3) of the third planetary gearset (RS3) are connected with one another; the carrier (ST2) of the second planetary gearset (RS2) is connected with the ring gear (HO3) of the third planetary gearset (RS3), and the carrier (ST1) of the first planetary gearset (RS1) is connected with the ring gear (HO2) of the second planetary gearset (RS2), and

ii) the output shaft (AB), the ring gear (HO1) of the first planetary gearset (RS1) and the carrier (ST2) of the second planetary gearset (RS2) are connected with one another, and the carrier (ST3) of the third planetary gearset (RS3) is connected with the ring gear (HO2) of the second planetary gearset (RS2), and the carrier (ST1) of the first planetary gearset (RS1) is connected with the ring gear (HO3) of the third planetary gearset (RS3);

one shaft axially passes centrally through the second planetary gearset (RS2); and

the first shifting component (A) being a multidisk brake;

the second shifting component (B) and the fifth shifting component (E) are axially located between the first planetary gear set (RS1) and the second planetary gear set (RS2);

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the fourth shifting component (D) is radially arranged above the first planetary gearset (RS1), the second planetary gearset (RS2) and the third planetary gearset (RS3); and

the drive shaft (AN) axially passes centrally through the link-shaft (STW3).

140. (NEW) The multistep automatic transmission according to claim 139, wherein the one shaft axially passing centrally through the second planetary gearset (RS2) is the drive shaft (AN).